UNITED STATES PATENT AND TRADEMARK OFFICE

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/043,803	01/10/2002	Richard Clewer	PD-201003	9080

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EXAMINER
FLANAGAN, KRISTA M

ART UNIT	PAPER NUMBER
2817	

DATE MAILED: 10/03/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

PTO-90C (Rev. 10/03)

	Application No.	Applicant(s)
Office Action Summary	10/043,803	CLEWER ET AL.
	Examiner	Art Unit	
	Krista M. Flanagan	2817	

-- *The MAILING DATE of this communication appears on the cover sheet with the correspondence address* --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE _3_ MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.
- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on _15 July 2005_.

2a)☐ This action is **FINAL**.   2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) _1-20_ is/are pending in the application.

    4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) _1-20_ is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

    Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

    Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

    a)☐ All   b)☐ Some * c)☐ None of:

      1.☐ Certified copies of the priority documents have been received.

      2.☐ Certified copies of the priority documents have been received in Application No. _____.

      3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

    * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1)☒ Notice of References Cited (PTO-892)

2)☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3)☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
    Paper No(s)/Mail Date _____.

4)☐ Interview Summary (PTO-413)
    Paper No(s)/Mail Date. _____.

5)☐ Notice of Informal Patent Application (PTO-152)

6)☐ Other: _____.

DETAILED ACTION

Claim Objections

1.   In view of the amendment filed on 15 July 2005 the Examiner withdraws all claim

objections from the previous Office Action.

Response to Arguments

2.   Applicant's arguments with respect to claims 6-10 and 16-20 have been considered but

are moot in view of the new ground(s) of rejection. Rejection with respect to claims 1-5 and 11-

15 stands.

Claim Rejections - 35 USC § 102

3.   The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the

basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed
> in the United States before the invention by the applicant for patent or (2) a patent granted on an application for
> patent by another filed in the United States before the invention by the applicant for patent, except that an
> international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this
> subsection of an application filed in the United States only if the international application designated the United
> States and was published under Article 21(2) of such treaty in the English language.

4.   Claims 1-5 and 11-15 are rejected under 35 U.S.C. 102(e) as being anticipated by US

Patent No. 6,055,280 to Genrich.

5.   Regarding claim 1, Genrich discloses a demodulator for use in a satellite communication

system (See column 2, lines 1-5), said demodulator operative for receiving a modulated signal

having a data rate R, said modulated signal comprising retrievable data (See column 2, lines 1-4),

said demodulator comprising: means for partitioning said modulated signal into N data channels,

each of said data channels having a data rate equal to R/N (See column 2, lines 30-32; column 7,

lines 1-4 and figure 1, block 14); and means for processing the modulated signal contained in

each of said N data channels at a data rate of R/N, said means for processing operative for

regenerating and outputting said retrievable data (See figure 2).

6.   Regarding claim 2, which inherits all of the limitations of claim 1, Genrich discloses a

demodulator, wherein said means for partitioning said modulated signal into N data channels

comprises a demultiplexer, said demultiplexer operative for receiving samples of said modulated

signal at a data rate R samples per second, and for outputting one of said received samples to one

of said data channels at a divided data rate, claimed R/N, samples per second (See column 2,

lines 30-32; column 7, lines 1-4 and figure 1, block 14).

7.   Regarding claim 3, which inherits all of the limitations of claim 2, Genrich discloses a

demodulator, wherein said demultiplexer operates to output one of said received samples to each

of said data channels at a divided data rate, claimed R/N, samples per second (See column 2,

lines 30-32; column 7, lines 1-4 and figure 1, block 14).

8.   Regarding claim 4, which inherits all of the limitations of claim 1, Genrich discloses a

demodulator, wherein said means for partitioning said modulated signal into N data channels

generates a clock signal having a divided rate, claimed of R/N, said clock signal be coupled to

and utilized to clock the means for processing the modulated signal (See figure 1, block 14 and

figure 2, block 21).

9.   Regarding claim 5, which inherits all of the limitations of claim 1, Genrich discloses a

demodulator, wherein said modulated signal is generated utilizing QPSK modulation (See

column 2, lines 24-25).

10.   Regarding claim 11, Genrich discloses a method of demodulating an incoming

modulation signal for use in a satellite communication system (See column 2, lines 1-5), said

incoming modulation signal having a data rate R, said modulation signal comprising retrievable data, said method comprising the steps of: partitioning said modulation signal into N data channels, each of said data channels having a data rate equal to R/N (See column 2, lines 30-32 and column 7, lines 1-4); processing the modulation signal contained in each of said N data channels at a divided data rate, claimed R/N, so as to regenerate said retrievable data (See figure 2, block 21) ; and outputting said retrievable data (See figure 2, data output).

11.   Regarding claim 12, which inherits all of the limitations of claim 11, Genrich discloses a method of demodulating, wherein said step of partitioning said modulation signal into N data channels further comprises the step of outputting one of said received samples to one of said data channels at a divided data rate, claimed R/N, samples per second (See column 2, lines 30-32 and column 7, lines 1-4).

12.   Regarding claim 13, which inherits all of the limitations of claim 11, Genrich discloses a method of demodulating, wherein said step of partitioning said modulation signal into N data channels further comprises the step of outputting one of said received samples to each of said data channels at a divided data rate, claimed R/N, samples per second (See column 2, lines 30-32 and column 7, lines 1-4).

13.   Regarding claim 14, which inherits all of the limitations of claim 11, Genrich discloses a method of demodulating, wherein said step of partitioning said modulation signal into N data channels further comprises generating a clock signal having a divided rate, claimed R/N, said clock signal be coupled to and utilized in the step of processing the modulation signal (See figure 1, block 14 and figure 2, block 21).

14.   Regarding claim 15, which inherits all of the limitations of claim 11, Genrich discloses a

method of demodulating, wherein said modulated signal is generated utilizing QPSK modulation

(See column 2, lines 24-25).

Claim Rejections - 35 USC § 103

15.   The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all

obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in
> section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are
> such that the subject matter as a whole would have been obvious at the time the invention was made to a person
> having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the
> manner in which the invention was made.

16.   Claims 6-10 and 16-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over

US Patent No. 6,055,280 to Genrich and in further view of US Patent No. 6,069,928 to Gupta.

17.   Regarding claim 6, which inherits all of the limitations of claim 1, Genrich discloses a

demodulator, for high data rates (See column 3, lines 11-16). Genrich fails to disclose a data rate

of 800 MHz. However it is well known in the art that satellite communication systems

demodulators have high data rates. There is no criticality shown for choosing the limit "800

MHz", therefore no patentable weight is given.

18.   Regarding claim 7, Genrich discloses a demodulator for use in a satellite communication

system (See column 2, lines 1-5), said demodulator operative for receiving a modulated signal

having a data rate R such that said demodulator receives R input samples per second, said

modulated signal comprising retrievable data, said demodulator comprising: a demultiplexer

circuit (See figure 1, block 14), said demultiplexer circuit receiving said R samples per second as

an input signal and signal recovery circuitry for processing the input samples so as to regenerate

said retrievable data (See figure 2).   Genrich fails to disclose a demultiplexer circuit having N

shift registers. However, Gupta discloses a demultiplexer circuit having N shift registers (See

figures 1 and 3A, blocks 155 and 345 and column 3, lines 24-25). It would have been obvious to

one of ordinary skill in the art to use the demultiplexer circuit having N shift registers of Gupta

in the design of Genrich to aid in parallel processing the input data samples at the time the

invention was made.

19.   Regarding claim 8, which inherits all of the limitations of claim 7, Genrich discloses a

demodulator, wherein said demultiplexer generates a clock signal having a divided rate, claimed

R/N, said clock signal be coupled to and utilized to clock the signal recovery circuitry for

processing the modulated signal (See figure 1, block 14 and figure 2, block 21).

20.   Regarding claim 9, which inherits all of the limitations of claim 7, Genrich discloses a

demodulator, wherein said modulated signal is generated utilizing QPSK modulation (See

column 2, lines 24-25).

21.   Regarding claim 10, which inherits all of the limitations of claim 7, Genrich discloses a

demodulator, for high data rates (See column 3, lines 11-16). Genrich fails to disclose a data rate

of 800 MHz. However it is well known in the art that satellite communication systems

demodulators have high data rates. There is no criticality shown for choosing the limit "800

MHz", therefore no patentable weight is given.

22.   Regarding claim 16, which inherits all of the limitations of claim 11, Genrich discloses a

demodulator, for high data rates (See column 3, lines 11-16). Genrich fails to disclose a data rate

of 800 MHz. However it is well known in the art that satellite communication systems

demodulators have high data rates. There is no criticality shown for choosing the limit "800

MHz", therefore no patentable weight is given.

23.   Regarding claim 17, Genrich discloses a method of demodulating an incoming

modulation signal for use in a satellite communication system (See column 2, lines 1-5), said

incoming modulation signal having a data rate R such that R input samples per second are

received, said modulation signal comprising retrievable data, said method comprising the steps

of: demultiplexing the incoming modulation signal, said demultiplexing step comprising

inputting said R input samples at a divided data rate, claimed R/N, samples per second (See

column 2, lines 30-32 and column 7, lines 1-4); and processing the input samples utilizing signal

recovery circuitry so as to regenerate said retrievable data (See figure 2). Genrich fails to

explicitly disclose a method where demultiplexing the incoming modulation signal utilizes N

shift registers. However, Gupta discloses a demultiplexing step where demultiplexing the

incoming modulation signal utilizes N shift register, the step also comprising inputting said R

input samples sequentially into said N shift registers such that each of said shift registers receives

input samples at a data rate of R/N samples per second (See figures 1 and 3A, blocks 155 and

345 and column 3, lines 24-25). It would have been obvious to one of ordinary skill in the art to

use the demultiplexing method utilizing N shift registers of Gupta with the method of Genrich to

aid in parallel processing the input data samples at the time the invention was made.

24.   Regarding claim 18, which inherits all of the limitations of claim 17, Genrich discloses a

method of demodulating, wherein said demultiplexing step comprises generating a clock signal

having a divided rate, claimed R/N, said clock signal being coupled to and utilized by said signal

recovery circuitry (See figure 1, block 14 and figure 2, block 21).

25.   Regarding claim 19, which inherits all of the limitations of claim 17, Genrich discloses a

method of demodulating, wherein said modulated signal is generated utilizing QPSK modulation
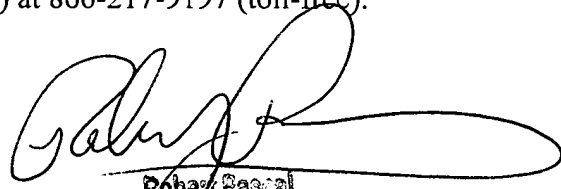
(See column 2, lines 24-25).

26.   Regarding claim 20, which inherits all of the limitations of claim 17, Genrich discloses a

demodulator, for high data rates (See column 3, lines 11-16). Genrich fails to disclose a data rate

of 800 MHz. However it is well known in the art that satellite communication systems

demodulators have high data rates. There is no criticality shown for choosing the limit "800

MHz", therefore no patentable weight is given.

Any inquiry concerning this communication or earlier communications from the

examiner should be directed to Krista M. Flanagan whose telephone number is (571) 272-2203.

The examiner can normally be reached on Monday - Friday, 8 - 4:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's

supervisor, Robert J. Pascal can be reached on (571) 272-1769. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent

Application Information Retrieval (PAIR) system. Status information for published applications

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system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

K. Flanagan/20050928

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